

A B S T R A C T

A METHOD AND APPARATUS FOR DETECTING DEFECTS OF AT LEAST ONE ROTOR OF A ROTARY WING AIRCRAFT

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A method and apparatus for detecting the defects of at least one rotor of a rotary wing aircraft, in particular a helicopter, in order to adjust the rotor.

In the method, in a preliminary step, a reference aircraft is used corresponding to a particular type of aircraft and having a rotor (6, 10) without defect and adjusted so that the level of vibration is at a minimum, a series of measurements are taken on the aircraft (1), and a neural network is deduced therefrom illustrating the relationships between accelerations representative of vibration, and defects, and adjustment parameters. Thereafter, in a later step, for a particular aircraft (1) of the same type, measurements are taken on the particular aircraft (1) and on the basis of said measurements and on the basis of the neural network, the defects, if any, are detected and values for the adjustment parameters are determined that will enable the level of vibration of the aircraft (1) to be minimized, which parameters are applied to the rotor (6, 10).

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35 Translation of the title and the abstract as published by the PCT Authorities, possibly after making changes, ex officio, e.g. under PCT Rules 37.2, 38.2, and/or 48.3.